



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

V.—*The Practice of Navigation and Nautical Astronomy.* By H. RAPER, Lieutenant, R.N., Secretary to the Royal Astronomical Society. Communicated by Captain WASHINGTON, Royal Navy.

THIS work, of which the first volume is before us, is intended, as appears from the preface, as a complete system of Practical Navigation and Nautical Astronomy. The present volume is for the use of seamen or such other persons as are provided with those instruments only, which can be used on board ship. The author has excluded everything not directly bearing on the subject, as marine-surveying, and other matters usually admitted into the course of instruction of persons intended for the Sea. In consequence of such omissions, for which the author states his reasons in the preface, he is enabled to treat the real business of the navigator, or other person concerned with the determination of latitude and longitude by the sextant or circle, with more minuteness of detail than in most other works. The chief points in which this work is an improvement upon all former books on navigation are—

1st.—That all necessary information is furnished to the seaman on the subject of Local Magnetic Attraction.

2nd.—The highly useful Problem of determining the Latitude at sea, by the reduction of an Altitude to the Meridian, will be found greatly abridged; and a Table is added for the purpose of showing within what limits the result may be depended upon when the time is in error.

3rd.—The approximate Solutions of Double Altitudes, and likewise of Lunars for common use at sea, are new, and will, it is presumed, be found most convenient in practice.

4th.—In the Tabular Part of the work will be found much that is new, and, it is hoped, useful: for instance, the table for the resolution of Spherical Triangles by inspection; a table of the Square of the Depression of the Horizon, by which problems relating to the distance of high land at sea are reduced to mere addition and subtraction,—with some others. The Logarithms of the Apparent Time are given, for the convenience of this constant computation, to every second of the twelve hours, with a scale of the *arc*.

Of the scope or purpose of the entire work, we cannot give any account until the appearance of the second volume, which, besides the theory or mathematical investigations of the whole, will con-

tain the methods of finding the Latitude and Longitude on shore by fixed instruments, or those, we suppose, called by the French *à bulle d'air*. The chief interest which this work possesses in a geographical point of view, arises from the labour which the author has imposed on himself of examining the connexion of all the maritime positions, and deducing the longitudes from new combinations of all the existing data on certain principles: the result of which appears in Table viii. of this volume. An outline of the plan was given in Mr. W. R. Hamilton's Anniversary Address to this Society in May, 1839.

The publication of the series of papers constituting the discussion of the positions in the *Nautical Magazine*, which was interrupted by the publication of the present volume, has not yet been renewed. We call attention to these positions, because the author's system (of adopting fundamental astronomical points and arranging the chronometric differences from these, without the mixture, where it could be avoided, of astronomical observations) is, we are persuaded, the only certain method of advancing to an accurate and properly connected arrangement.

The author observes (Preface, p. x.) :—

“The numerous chronometric measures furnished of late years have rendered it necessary to deduce longitudes in a more systematic and accurate manner than that hitherto followed, which has chiefly consisted in modifying former determinations by means of those succeeding them. *Absolute* or astronomical positions, and *relative* positions, being distinct things, and the latter being by far of the greater consequence to navigation, it is necessary, preparatory to a complete and final arrangement, to separate these two kinds of determinations. Accordingly, in a series of papers, some of which have been already published in the *Nautical Magazine*, I have endeavoured to arrange the chronometric differences of longitude with reference to certain fixed points, convenient for the purpose, which it is proposed to call *Secondary Meridians*. These standard positions, of which the number assumed is eighteen, being considerably distant from each other, are determined nearly enough for present purposes, and would, according to the system proposed, be finally settled by long series of astronomical observations.”

And in a foot-note he adds :—

“The data or evidence for the several positions being given in the above-mentioned papers, the value of each determination is easily appreciated: and accordingly, individuals in possession of one or more good watches may, by correcting defective measures, or by establishing new links of connexion, render material service to maritime geography.”

It is manifest from the above brief extracts that a more valuable contribution to the advancement of positive geography has

seldom been made, and we cordially recommend it to all seamen as the most complete work on navigation and nautical astronomy yet published. We hope too to see this book adopted in all our nautical schools, and issued to every ship in Her Majesty's service. Why should it not take the place of the bulky tables of Mendoza Rios, at present supplied to all the ships in the fleet, and which; it may be safely affirmed, are not opened once in a voyage on board the greater part of Her Majesty's Vessels?

And now that the examination of geographical positions has been begun in earnest and in the right manner, we may venture to express a hope that geographers in this country will not let the subject fall to the ground, but combine their efforts to produce as accurate a table of positions as our *data* will admit of—materials are far from wanting, and an example has been well set by M. Daussey in his valuable Table of Positions, appended to the *Connaissance des Temps*, and which by his annual *Additions* he endeavours to keep on a level with the latest determinations.

Such a work is not to be lightly entered upon, but the difficulties, though great, are not insurmountable if resolutely grappled with; and we cordially hope that some competent person may be found to undertake the work, assured that no more valuable service could at the present moment be rendered to geography.

VI.—*Reise in Abyssinien*. Von Dr. EDUARD RÜPPELL. 2ter Band. Frankfurt-am-Main. 1840. 8vo. *Travels in Abyssinia*. By Dr. EDWARD RÜPPELL. 2nd vol. 8vo.

THE first volume of this work, published in 1838, having been already announced in the "Geographical Journal" (vol. ix. p. 490), it will be unnecessary to enter into any details as to the plan and object of the author's journey, or to enlarge upon the many talents and acquirements indispensably requisite to form a scientific traveller, which are possessed by him in no ordinary degree. In this as in the former volume, Dr. Rüppell has happily shaken off that extreme dread of making himself the hero of his story, which withheld him in his first publication, from mentioning those personal incidents, those perils and adventures by sea and land, which are sure to befall the traveller "in a strange country," and which, while they excite the reader's interest in his progress, give the clearest insight into the civil and moral condition of the people among whom he sojourns. It is that defect which has rendered his *Travels in Kordofan* one of